A SYSTEM AND METHOD FOR ASSISTING A BUYER IN SELECTING A SUPPLIER OF GOODS OR SERVICES

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention generally relates to selecting suppliers of goods or services, and more particularly to a system and method which allows a buyer to make an informed decision in selecting a supplier and for then insuring the buyer against any economic damage which may result from that selection.

Background Description

Buyers, both individual and corporate, are faced with the continuing challenge of purchasing goods or services in the most cost-efficient manner possible. In making this decision, there are various trade-offs to consider. Perhaps the most important trade-off involves striking a balance between cost and quality. It is the objective of every buyer to select the supplier who will provide the highest quality goods and services for the cheapest possible price. By making the right selection, buyers can improve their balance sheets and,

simultaneously, benefit the consumer by passing along a lower-cost, higher-quality product into the marketplace.

With the emergence of the internet and an increase in brick-and-mortar businesses in general, the choice of a supplier is perhaps more difficult today than ever before. New suppliers are always entering the market, and existing suppliers are upgrading their businesses either by branching into new areas or improving their current product lines. As a result, a supplier who may once have been regarded as satisfactory for meeting the needs of a particular buyer may no longer prove to be adequate.

The internet has addressed the needs of linking buyers and sellers vis-a-vis so-called business-to-business website applications. B-to-B applications have proven to be a significant step forward in expanding the global market. However, they also magnify long-standing problems which buyers of brick-and-mortar type businesses have had to endure for decades.

One of these problems centers around the unfamiliarity buyers have with the business practices of suppliers and the reliability of their products. This is especially true in the case of a supplier who is remotely located from the buyer or one who has newly entered the market. These remotely located or untested suppliers often claim to have superior products than their competitors and for a lower price. Without any first-hand information, however, buyers have no way of substantiating the validity of their claims. The risk of receiving

goods or services that are lower in quality than advertised is thus very real. And even if the goods or services are of satisfactory quality, production capacity is adequate, and delivery transportation capacity is adequate, the insurer may feel that the new supplier's reputation or practices might result in a boycott being organized against the buyer if it purchases from this supplier, i.e., many additional factors may go into the insurance companies risk analysis. It therefore becomes quickly apparent that the wrong choice of a supplier can negatively impact a buyer's business both in terms of market share and dwindling consumer-confidence in the buyer's brand name.

From the foregoing, it is clear that, presently, buyers have no objective way of selecting suppliers of goods or services that will be the most optimal choice for meeting their particular needs.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a system and method which serves as an objective tool for assisting buyers in deciding which of a plurality of suppliers is the best choice for meeting the buyer's specific needs.

It is another object of the present invention to achieve the above object by, first, creating a new form of insurance that would protect buyers (e.g., in the form of a full or partial reimbursement) from economic damage that may

result from the buyer's selection and subsequent purchase of goods or services from a supplier. The system and method of the present invention then allows an insurance company to objectively decide whether a particular supplier is suitable for the buyer. The insurance company objectively decides suitability by examining the particular needs of the buyer's business, the products or services offered the supplier, the business practices of the supplier, as well as other information.

The final decision is then passed on to the buyer in various ways, including a decision not to offer an insurance policy in the first place. If a policy is offered, the size of the premium price may be used to convey suitability. For example, a high premium price would convey to the buyer that there is a high risk associated with buying from the supplier. Conversely, a relatively low premium price would convey that there is a low risk.

It is another object of the present invention to embody the insurance company's decision-making process in software, and more preferably to convey information between the buyer and insurance company in machine-readable form via the internet, for example, through an interactive website.

It is another object of the present invention to allow the buyer to make the final decision of selecting a supplier based on the insurance company's recommendation, specifically by computing an effective price (derived, for example, by adding the supplier's cost for the requested goods or services and

the premium price of the insurance policy) and then comparing this effective price with the price charged by at least one other supplier of the goods or services. The one other supplier may be an existing supplier of the buyer.

These and other objects of the invention are realized by creating a new class of insurance so that if any problems arise as a result of the award of the supply contract, the buying company receives money from the insurance company which it can use to address or resolve the problems. This, in turn, motivates suppliers to document their capabilities to the insurance companies in order to achieve a low-risk insurance rating, and further to allow dynamic procurement systems to operate at the buying company.

Using a dynamic procurement system, the buying company may add a "per-unit insurance cost" to a "cheaper-supplier unit cost" to compute an "effective unit cost." If this effective unit cost is less than the price of an existing supplier, the buyer may choose to order from the new supplier with the added confidence that the order would be at least partially protected by the insurance policy issued by the insurance company. If the effective unit cost is more than the price of an existing supplier, or of the insurance policy is not offered in the first place, the system and method of the present invention advantageously provides the buyer with an objective basis from which to conclude that the new supplier is unacceptable.

Preferably, this solution offered by the present invention relies on the ability of the procurement and insurance systems to use machine-readable descriptions of what the buying company's product or service is, who their market is, what their reliability must be, and how crucial the component or service from the supplier is. These machine-readable descriptions are digitally transmitted to the insurance company, where software in conjunction with risk analysis can develop an insurance price. The price may be optimally chosen by the insurance company because it has visibility (data sources) to all (or much of) the business this supplier is doing with other buying companies, its track record (performance history as well as recent process changes), as well as a view of the entire portfolio of insurance that has been written.

BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing and other objects, aspects and advantages will be better understood from the following detailed description of a preferred embodiment of the invention with reference to the drawings, in which:

Figure 1 is a flow chart showing information flow between a buyer, an insurer, and one or more suppliers in accordance with an embodiment of the present invention;

Figure 2 is a flow chart showing how a buyer interacts with an insurer in accordance with an embodiment of the present invention;

Figure 3 is a flow chart showing how an insurer decides whether to offer an insurance policy to a buyer in accordance with the present invention;

Figure 4 is a flow chart showing the insurer's experience follow-up in accordance with the present invention; and

Figure 5 is a flow chart showing the supplier submission of data to improve a rating given by an insurance company in accordance with the present invention.

Figure 6 is a flow chart showing the buyer's evaluation of many suppliers against a previous and usual supplier, or an evaluation of many suppliers for a first time use of the product or service.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT OF THE INVENTION

Referring now to the drawings, and more particularly to Figure 1, there is shown a flow chart of information flow between a buyer 102 (e.g., a producer or manufacturer) and primary and alternative suppliers of goods or services. As will be discussed in greater detail below, this information flow

may take place over a network such as the internet. As shown in the chart, the method begins with a producer 102 communicating a request for proposal (RFP) 115 to a first supplier, who may be a primary or trusted supplier 108, and an RFP 120 to at least one alternative supplier 106, who may be a new supplier either to the market or to the buyer. If desired, alternative supplier 106 may be a supplier which has been in the market for some time. From these initial steps alone, it therefore is apparent that the invention provides a useful tool for assisting buyers in selecting the optimal supplier, irrespective of whether the buyers are new to the market although its application to new suppliers is preferable.

Returning to the flow chart, alternative supplier 106 responds at 130 with a price 125, shown as Price A. Likewise, the primary supplier 108 responds at 140 with a price 135, shown as Price P. The producer generates at 142 usage and alternate supplier information 142 which are communicated at 144 to the insurer 104 in the form of a request for quote (RFQ) for insurance. The insurer 104 may or may not respond with a price for insurance 146 which is communicated at 148 to the producer 102. The producer 102 computes in function block 150 an effective price as Price A plus the insurance price. A determination is made by the producer in decision block 155 as to whether the effective price is less than Price P from the primary supplier. If so, the producer 102 commits to the insurance in function block 160 and

communicates this to the insurer 104 at 165. The producer then orders from the alternative supplier 106 in function block 170 by communicating the order at 175.

If, however, the effective price is not less than Price P as determined in decision block 155, the insurance is canceled in function block 181, this cancellation being communicated to the insurer 104 at 185. An order from the primary supplier is placed in function block 190 and communicated to the primary supplier 108 at 195. If a current supplier is used, not only would the insurance not be available, optionally there would not even be an opportunity to obtain an evaluation from the insurance company.

The invention computes an effective, or hedged, price for the buying company or producer 102. It leverages the ability of the insurance company 104 to quantify risk and to tap data related to the history of the new supplier 108 with other companies, or a primary (trusted) supplier 108. The invention grows the insurance marketplace in a dramatically new direction. It leads to cheaper costs for buying companies by leveraging the ability of insurance companies to have numerically intensive economic simulations which allow a far more accurate prediction of what the risk exposure actually is.

The basic steps are:

a) The buyer computes "component requirements and potential supplier insurance request for quotation (RFQ)" data structure. This uniquely

identifies the buyer, the supplier, the component or service, the products and services it will be used in, who buys those products and services, what the concerns are if they experience functional failure, inadequate supply, whether a failure in this component can be replaced in the field or whether it would require replacing the entire buyer-produced item, how quickly a failure must be fixed based on the users of the buyer-produced item, etc. (One of these for each supplier may be prepared.)

b) The buyer sends "component requirements and potential supplier insurance RFQ" to one (or more) insurance companies.

c) The insurance company consults a database concerning the component or service, supplier, buyer, market and retrieves parameters. In case of insufficient data in the database, the insurance company investigates the supplier.

d) Parameters are run through an analysis (in software, by human, or a combination) to determine the willingness of the insurance company to carry this policy and pricing.

e) The insurance company computer returns "will not carry" or "cost for insurance" to the buyer's procurement system.

f) The buyer's procurement system computes "effective price when bought from this supplier".

g) The buyer then compares the "effective price" among multiple suppliers to choose from whom to buy.

h) The insurance company tracks on an ongoing basis who is buying from whom and what the successes and failures are, and maintains this data in its database for use in responding to future quotations.

The buying organization's process is illustrated in greater detail in Figure 2. The process begins at input block 200 when a new supplier quotation is received. A determination is made in decision block 210 as to whether the quotation is more expensive than from a trusted supplier. If so, the order is placed with the trusted supplier in output block 290. However, if the quotation is less expensive than from the trusted supplier, a description of the supplied component is generated in function block 220. This description includes what the component will be used in, who purchases the component, the warranty for what the component will be used in (including terms and duration), implications of quality or inadequate supply problems (including on sales of other products not using the component), and the longest delay acceptable until the insurer's quote is received. With this description in hand, a request for quotation (RFQ) is sent to the insurance company in function block 230.

Figure 3 shows the insurer's process when the RFQ is received in input block 300. The RFQ is analyzed against relevant information needed to make a decision and to compute pricing for insurance in function block 310. The

necessary information is accessed from several databases including a suppliers database 312, a current written policies database 314 (including pending quoted policies (the previous output of step 370 below) and including expected "normal" losses under this policy (see 425)), an organization database (i.e., organizations which request quotes) 316, and a database with information about using the supplier's component or service in the requestor's product 318.

When all the relevant information has been retrieved, a determination is made in decision block 320 as to whether any information is missing that is necessary to respond to the RFQ. If so, a determination is made in decision block 325 as to whether the RFQ provides any time to obtain the necessary information. If it does, the missing information is obtained in function block 320, and the information is inserted into the relevant databases in function block 335. If, however, no time is provided in the RFQ to obtain the missing information, then the RFQ is returned in output block 340 indicating that there is no interest in insuring.

Returning to decision block 320, assuming all information needed to make a decision on insurance has been retrieved, a further decision is made in decision block 350 to determine if this policy would concentrate the risks of the insurer too much. If so, the RFQ is returned indicating no interest insuring in output block 340. Otherwise, probabilities and costs of payout are

calculated at 360, and based on this calculation the premium price is calculated in function block 350.The insurers databases are updated in function block 370, and then the RFQ is returned with the premium prices and the date by which the policy must be confirmed in function block 380.

Various factors may be taken into consideration in performing the calculation in block 360. For example, if the insurance company knows that the alternative supplier's maximum monthly output is MO units, and the number of units needed by the producer is Y units, and that the supplier already has contracts with other producers to supply X units, the decision to insure, or the price of the insurance, may depend on whether the SLACK is positive (and by how much) or negative, where SLACK = MO - X - Y.

Another factor may be the recognition of dependencies of the producer on one or more suppliers in terms. This factor, for example, may involve the insurer recognizing (based on information from an appropriate database) that the producer is buying a component or service in multiple lots from different suppliers. If the insurer is also able to determine that the different suppliers rely on a common form of transportation infrastructure, then the insurer can in accordance with the present invention recognize that the producer's business would be compromised if that common transportation infrastructure collapses or is otherwise impaired (e.g., through a strike, a disaster which prevents travel over the roadways, through an embargo, etc). In this instance, the

insurance company may recommend two suppliers that do not have such a common dependency.

Referring back to Figure 2, when a response is received from the insurance company, a determination is made in decision block 240 as to whether the insurance company is willing to insure. If not, the order is placed with the trusted supplier in output block 290. However, if the insurance company is willing to insure, then the insurance cost is added to the new supplier cost to get the effective cost in function block 250. A test is then made in decision block 260 to determine if the effective cost is still less than from the trusted supplier. If not, the insurance company is notified in function block 265 that the insurance will not be used, and the order is placed with the trusted supplier in output block 290. If, however, the effective cost is less than from the trusted supplier, the insurance is paid for in function block 270, and the order is placed with the new supplier in output block 280.

The responses to the insurance company communicated in function blocks 265 and 270 are received at input block 375 in Figure 3. However, while waiting for a reply, a determination is made in decision block 385 as to whether the time for responding has expired. This time was set in the date function of output block 380. Assuming first that no response is received within the time period set, the databases are cleaned up reflecting that a policy will not be issued in function block 388, and the process completes in block

395. If a response is received before the time period has expired, a determination is made in decision block 390 as to whether the insured wants the policy activated (function block 270) or not (function block 265). If not, the databases are cleaned up in function block 388; otherwise, the databases are updated and the payment is credited in function block 392.

A part of the insurance company procedure is an experience follow-up which is used to update its information database on suppliers. This process is shown in Figure 4. The follow-up procedure 400 is performed for each policy still in force (or each previously issued where there is a possibility of new data). The buyer is polled in function block 405 to get experience data. The experience data is analyzed in decision block 410 to determine if there is new information on the supplier. If so, the information database on suppliers 415 is updated, and a test is made in decision block 420 to determine if there is still time to work with the supplier on improvements. If so, a further test is made in decision block 425 to determine if supplier performance has decreased versus expectations. If so, the insurer works with the supplier in block 430 to improve the supplier's performance. This feedback process is done until all policies still in force have been processed, as indicated at 495.

Since the willingness of an insurer to insure a transaction and the price of the policy makes a difference to the supplier as to whether a supplier receives an order, the supplier may submit data to improve its rating by the

insurance company. This process is shown in Figure 5. The supplier submits information on the quality, capacity and time-to-deliver ability to the insurer in block 505. The insurer analyzes this data in function block 510 and then determines in decision block 515 whether the submitted data warrants modifying the supplier profile. If so, the information database about suppliers 520 is updated. In either case, the data submitted by the supplier is acknowledged in function block 525 before the process finishes at 530.

Figure 6 shows a process which may be performed by the buying organization when multiple alternative suppers are being considered. It could easily occur that two new suppliers quote prices for products which are less expensive than the prices charged by a current (or usual) supplier. It is not necessarily the case that the least expensive quote is the best, because the insurance cost of that supplier might be higher than the insurance cost for a slightly more expensive alternative supplier. Therefore, the buyer may want to get insurance quotes for several suppliers (depending on whether the insurance company changes a fee for providing quotes, and how rapidly multiple quotes can be delivered).

The method of the present invention may provide for this situation by choosing as a tentative best supplier either the supplier which the buyer organization currently buys from or simply the first supplier which returned a quote. (Step 605). For all alternative suppliers (Step 610), the process shown

in Figure 2 (Steps 200 through 260; here shown as Step 615) may be used to determined the effective cost. Next, the method determines whether this supplier is superior to the tentative best supplier. (Step 620). If so, the tentative best supplier is replaced. (Step 625).

If there is sufficient time remaining to obtain additional insurance quotes before production must begin, and if insurance quotes require payment of a fee and the budget for obtaining such quotes has not been exhausted (Step 630), the method continues with the next supplier, if one exists (Step 635).

This process results in one supplier left as the best tentative supplier, and in Step 640, an order is placed with them, the insurance policy for them is activated (Step 645), and any other quotations requested on other suppliers are closed with the insurance company (Step 650).

The economic damage which the present invention is intended to insure against includes not only that which those skilled in the art would generally consider as financial injury to a business, but also any damage that occurs after selection of the supplier including, for example, damage resulting before, during, or at the time of delivery of the goods or services, that resulting from a failure of the goods or services to be as represented and even where the goods or services start failing well after the time of delivery.

Also, the present invention covers the situation where the insurance company never heard of the supplier before the RFQ arrived and needs to investigate before giving a quotation. Therefore, the information need not be in the database to begin with but may work if the information can be input into the database in time for a premium quote to be returned to the buyer during their decision window.

While the invention has been described in terms of a single preferred embodiment, those skilled in the art will recognize that the invention can be practiced with modification within the spirit and scope of the appended claims.